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# **Korea: A Different Perspective on the North-South Military Balance**

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**A Research Paper**

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*EA 87-10044  
October 1987*

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# **Korea: A Different Perspective on the North-South Military Balance**

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**A Research Paper**

This paper was prepared by [ ] Office  
of East Asian Analysis. Comments and queries are  
welcome and may be directed to the Chief,  
Northeast Asia Division, OEA, [ ]

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**Korea: A Different Perspective  
on the North-South  
Military Balance**

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**Summary**

*Information available  
as of 15 October 1987  
was used in this report.*

Our study of North and South Korean military capabilities has produced two major conclusions that differ from the conventional wisdom on the military balance: first, despite its edge in military capabilities, the North cannot achieve early and substantial gains during an invasion of the South even under surprise conditions; and, second, the gap between the capabilities of the two sides may well grow in the North's favor over the next decade:

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- Judging from numerical comparisons of men, units, and equipment, North Korea has substantial superiority over the South. This would seem to indicate that the North has a potentially dangerous edge in military capabilities.

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- Nonetheless, the North's superiority does not translate into victory in battle. The South's network of prepared defenses and the rugged terrain along the demilitarized zone (DMZ) creates a formidable obstacle that compensates in large part for the North's lead in men and weapons.

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our projections into the 1990s raise a cautionary note. On the basis of the assumptions that the North is committed to expanding and upgrading its weapons production, that its allies will help, and that Seoul's approach to force improvement will remain primarily reactive, we predict that the North will maintain and even increase its lead over the South.

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Several key issues could have a major impact on the accuracy of our projections for both countries. For the North, the state of the economy and the succession outcome could dictate P'yongyang's capability to generate the spurt in force improvement in the 1990s that our projections assumed. Our projections for the South assume that Seoul's programs will be affected by inadequate leadtime to counter weapon improvements in the North and by frequent delays in decisions over whether to purchase, produce indigenously, or coproduce new weapons. Such conditions could change, particularly if the South quickly recognized the pace of developments in the North and reacted with more efficiency than it has demonstrated in the past.

In any event, the US military presence, in our judgment, will remain a key element in deterring the North and in providing an augmentation force should deterrence fail.

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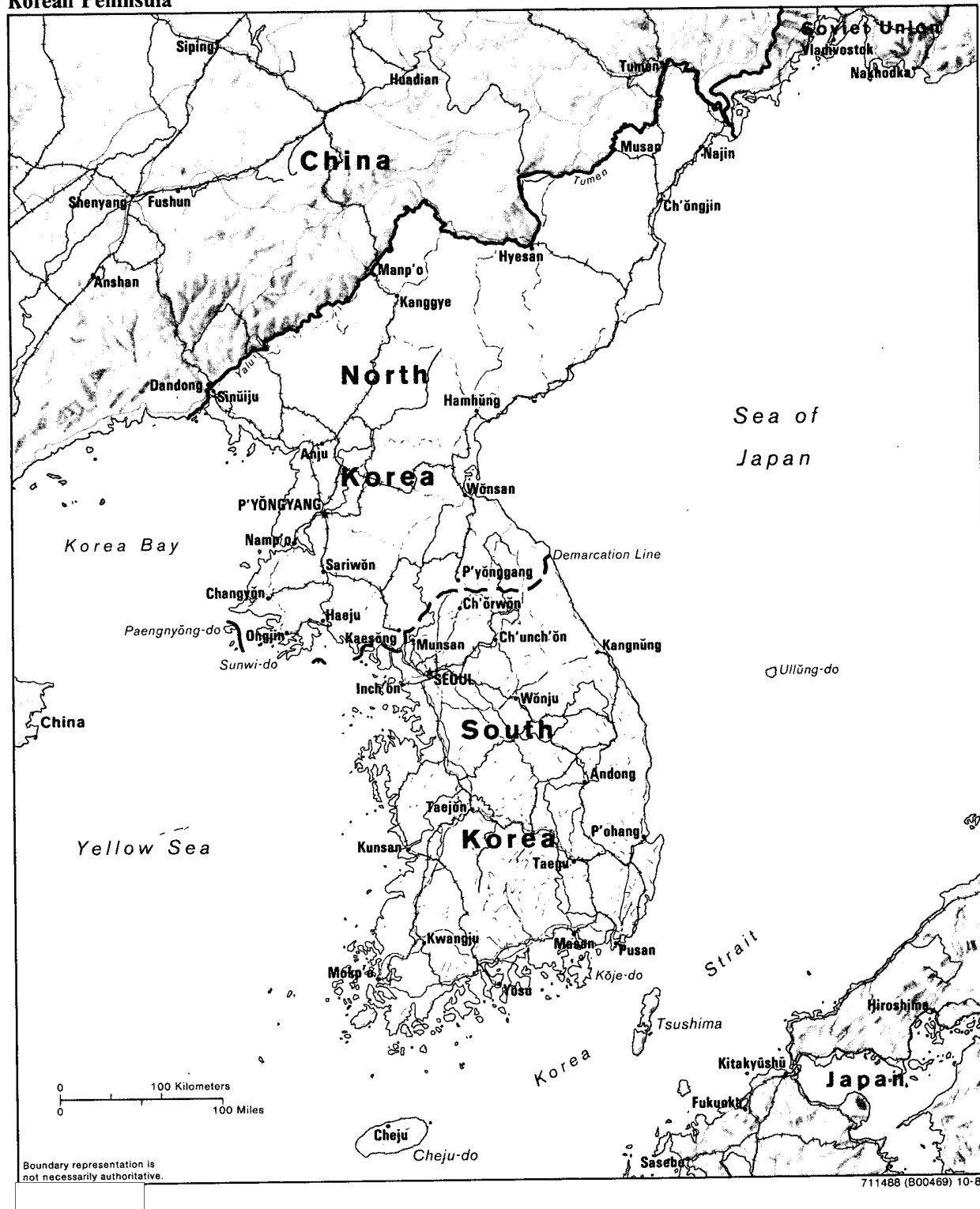
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## Korean Peninsula



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**Korea: A Different Perspective  
on the North-South  
Military Balance**

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**The Korean Peninsula: A Critical Military Balance**

The potential for a major conflict on the Korean peninsula makes the military balance a critical concern for North and South Korea as well as for their allies. Both Koreas have been expanding and improving their forces since the end of the Korean war, and, until the late 1960s, we assessed the South to have approximate parity with the North. Since then, however, the North Koreans have been engaged in a particularly striking ground force buildup—first to expand the force and increase its firepower and then to enhance its mobility. More recently, they have reorganized regular and reserve forces, formed mechanized corps and brigades, and deployed forces forward toward the demilitarized zone (DMZ). Taken together, these developments have heightened concern in the South about P'yongyang's intentions.

*Ground Forces.* An examination of the two Armies shows that North Korea holds a clear advantage in numbers of maneuver battalions and in virtually all categories of weapons. The North, for example, has almost a 2-to-1 lead in infantry battalions. Moreover, armored personnel carriers (APCs) and long-bed trucks provide mobility for about one-fifth of its infantry battalions, while fewer than 10 percent of the South's infantry battalions are similarly equipped.

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The South has gradually improved its force, for the most part reacting to gains in the North. For example, Seoul stepped up procurement of antiarmor weapons to meet the threat from P'yongyang's rapid expansion of its armor force. The South also countered North Korea's numerical advantage in fighters with the purchase and coproduction of quality aircraft. At the same time, South Korea has developed an extensive network of prepared defenses in the rugged terrain north of Seoul and extending across the width of the peninsula (see map).

*Reserve Forces.* The North has a similar edge in reserve forces. During the 1980s, P'yongyang reorganized its ready reserves and gained a 1.6-to-1 lead over the South in the number of reserve divisions. Unlike the past, when reserve units on both sides were lightly armed foot infantry formations that lacked armor and artillery, both sides recently have been strengthening their reserves. North Korea probably is

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**The Current Military Balance**

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passing on enough older weapons from the active forces to equip about 23 reserve divisions with artillery. The South is beefing up its reserves with artillery but more slowly, with less than half of its divisions comparably equipped. [redacted]

**Air Forces.** The North has a numerical lead in the air as well, including a 1.7-to-1 edge in fighter aircraft. In the past few years, both sides have received improved aircraft from their allies. P'yongyang has acquired 46 MIG-23 fighters from the USSR [redacted]

[redacted] Besides fighter interceptors, each side has a force of strategic and tactical ground-based air defense weapons, in which North Korea again has a numerical advantage. [redacted]

[redacted]

**Naval Forces.** In numbers of naval ships and craft, P'yongyang has about a 3.6-to-1 edge. Both navies are dedicated to coastal defense, although the forces are structured differently:

- **Major combatants.** The North's units are mostly small patrol boats and fast attack craft, but P'yongyang also has [redacted] diesel attack submarines. The South's fleet features destroyers and frigates—mostly former US ships of World War II vintage—and no submarines. These larger ships are less affected by unfavorable sea conditions and are equipped with weapon systems effective against the more numerous but smaller North Korean units.

- **Amphibious ships.** A mix of landing ships and craft gives both sides modest sea-lift capabilities [redacted]

[redacted]

The South's amphibious lift centers on [redacted] amphibious landing ships and craft, including some aging units acquired from the United States. [redacted]

**Comparing Quality**

A look at the number of men and weapons on both sides gives us one view of the North-South balance, but it leaves out the effect of qualitative differences in weapons. These differences can be particularly important in Korea, where the North has fielded large numbers of old weapons, while the South relies on fewer but somewhat more modern weapons. [redacted]

[redacted]

[redacted]

**Ground Forces.** North Korea has a total ground force [redacted] about twice that of the South and has a clear lead in all five major weapon categories. Within weapon categories, the South has near qualitative parity in only one weapon type—tube artillery, because of the recent deployment of its indigenously designed, long-range KH-179 howitzer—and has a modest lead in mortars. [redacted]

**Reserve Forces.** The North also leads in value measurements of the ready reserve forces. [redacted]

[redacted]

The qualitative value of the reserves is not likely to yield the same combat potential as active forces, because old equipment reduces in value as it ages further. [redacted]

**Air Forces.** Since the late 1970s, the North has maintained about a 3-to-2 lead in total force value. In fighters, however, the South gained qualitative parity by 1977 by importing and coproducing more

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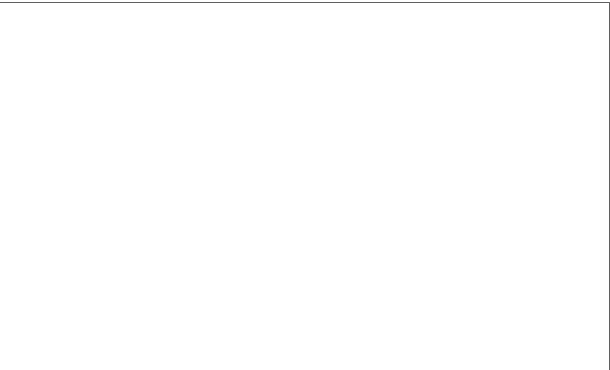


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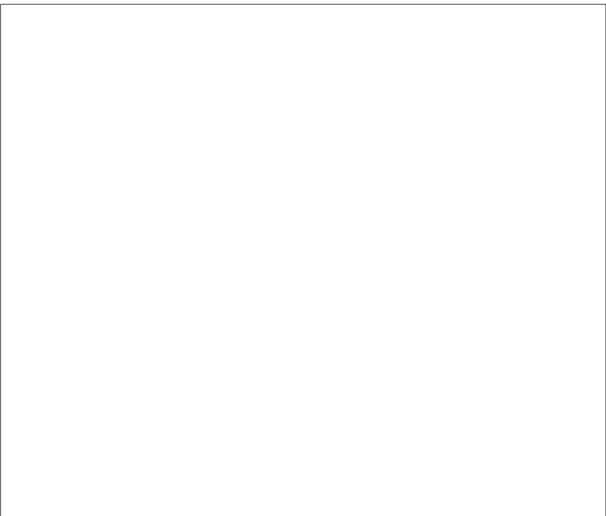
capable aircraft and it has maintained that position relative to the North's force, which is larger in numbers (see figure 5).



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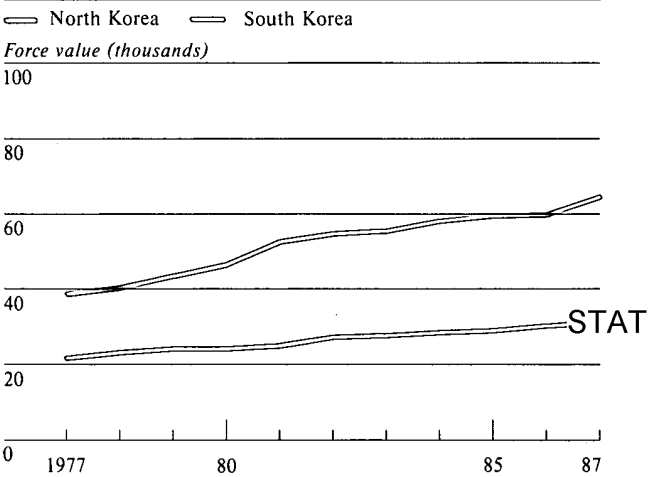
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**Figure 3**  
**North-South Korea:**  
**Total Forces, 1977-87**



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Figure 4  
North-South Korea:  
Reserve Forces, 1977-87

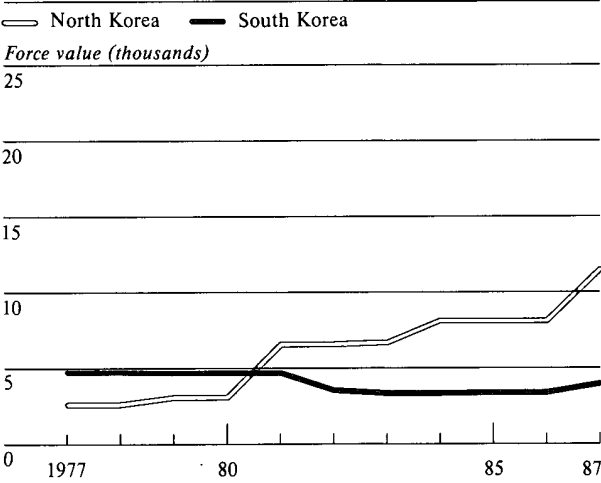
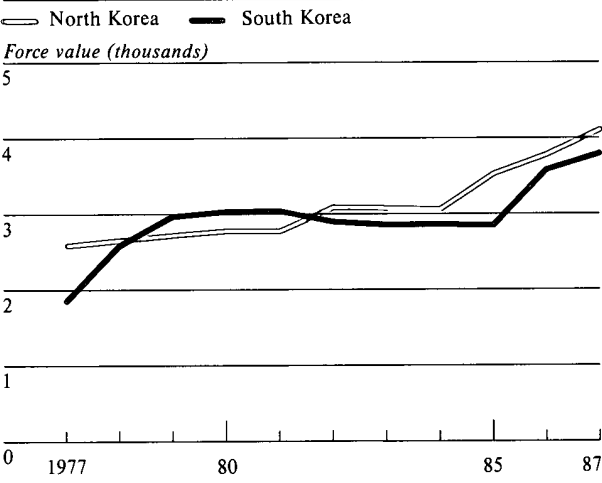


Figure 5  
North-South Korea:  
Fighters, 1977-87



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**Projecting Trends in the Balance**

[redacted] construction of additional 25X1 defense industrial capacity all point in this direction. If North Korea follows through on production, P'yongyang could be positioned for a spurt in force development programs in the early-to-mid-1990s.

- Our projections are also based on the assumption that North Korea's allies will help. Shipments of weapons and equipment suggest continuing assistance, and we believe more help from Moscow and Beijing may be forthcoming. 25X1

Our projections are based on several assumptions:

- One is that P'yongyang has made a firm commitment to move ahead with defense production. The appearance of several new weapons in a military parade in P'yongyang in 1985 and the [redacted]

- Our major assumption for South Korea is that Seoul will primarily continue to react to force improvements in the North, which creates a lag in its

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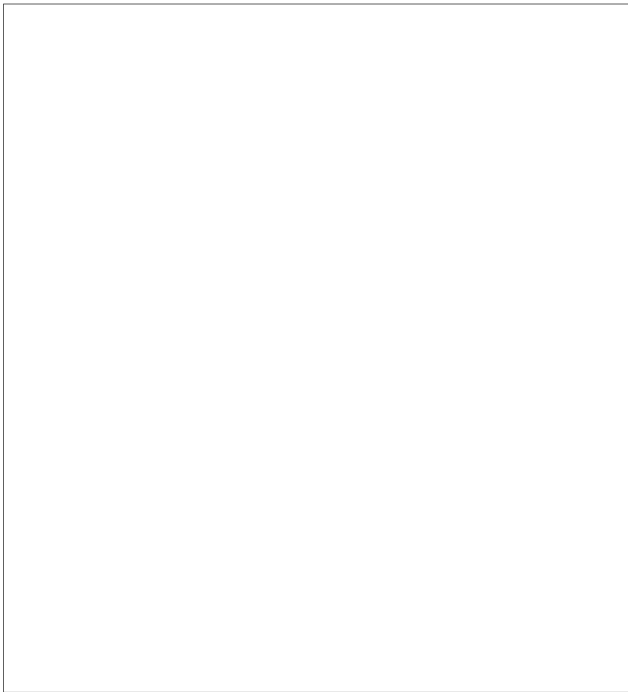
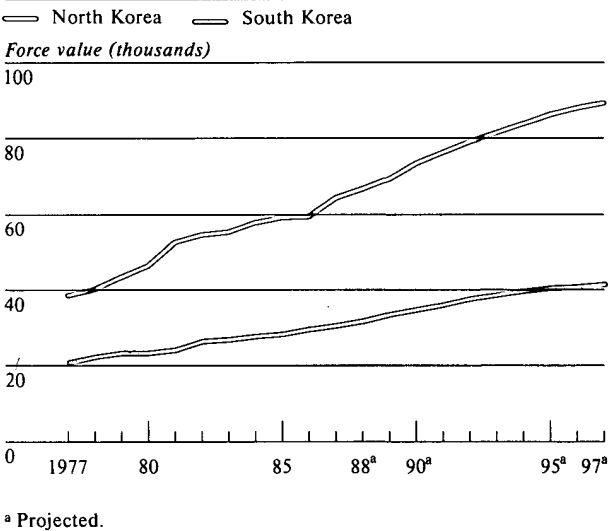


Figure 7  
North-South Korea:  
Active Ground Forces, 1977-97



response time. This lag can be significant [redacted]  
[redacted] Seoul's lengthy decisionmaking process over whether to buy or build new weapons—a new aircraft or a new tank, for example—also has tended to increase the time needed to field new weapons. [redacted]

[redacted]  
South is closing the gap, our projections indicate that Seoul's gains will be temporary:

- For the near term we expect that the South Koreans will narrow the quantitative and qualitative gap in several weapon categories, particularly in tanks and armored personnel carriers. Nonetheless, our projections indicate the North will maintain an edge over the next five years. We estimate that the effect of North Korea's sheer number of weapons will continue to outweigh what additional quality the South accrues from its new equipment.

- As our forecast goes further into the 1990s—and becomes more tenuous—we see the North again expanding its lead in weapons value. P'yongyang's expected spurt in the procurement and deployment of new and additional weapons would outweigh early gains by the South. [redacted]

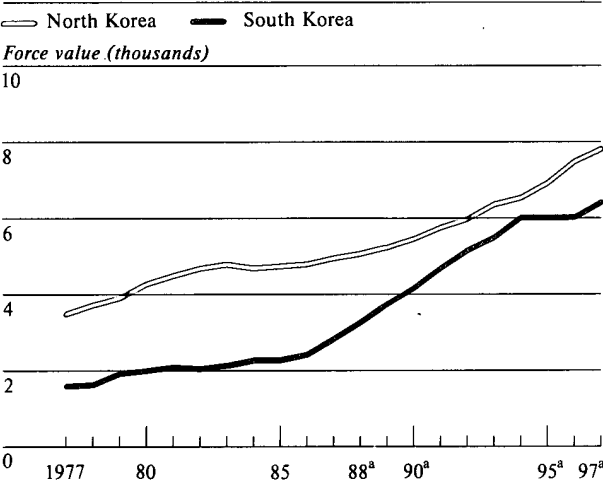
**Ground Forces**  
The bulk of the North's increase, [redacted] will occur in the ground forces, where the force value will be about twice that of the South for most of the projection period (see figure 7). Key categories of weapons in our projections include:

- **Tanks.** The gap in medium tanks favoring the North will shrink as the South fields its new K-1 tank, which we rated approximately equivalent to the US M-1 Abrams (see figure 8). It is substantially greater in value than the newest tank in the

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**Figure 8**  
**North-South Korea:**  
**Medium Tanks, 1977-97**



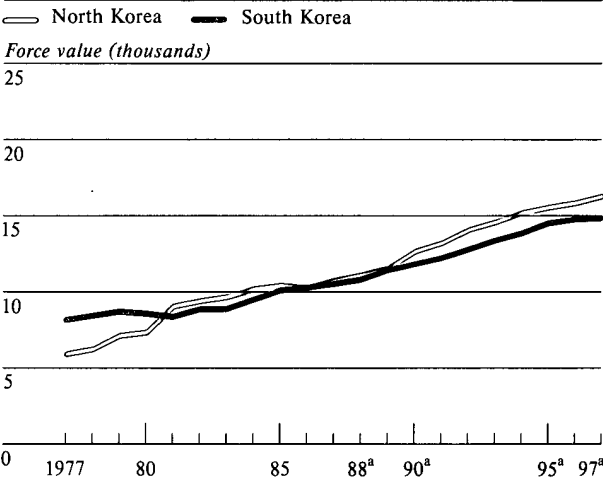
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North's inventory, the T-62. If, as we project, the North begins indigenous production of the Soviet T-72 in the early 1990s, however, the South will lose some of its advantage. The T-72 would be a logical follow-on to the North's T-55 and T-62 tanks, which were produced with Soviet assistance. Moscow may even supply P'yongyang with a limited number of T-72s before the end of the decade, perhaps in response to the deployment of the K-1.

- **Artillery.** The continued deployment of the KH-179 howitzer, [redacted] will enable the South to maintain near qualitative parity in tube artillery over most of the projection period (see figure 9). The [redacted] South's fire support, however, will continue to lag that of the North because of North Korea's continued deployment of multiple rocket launchers, an area in which the South has chosen not to compete [redacted]

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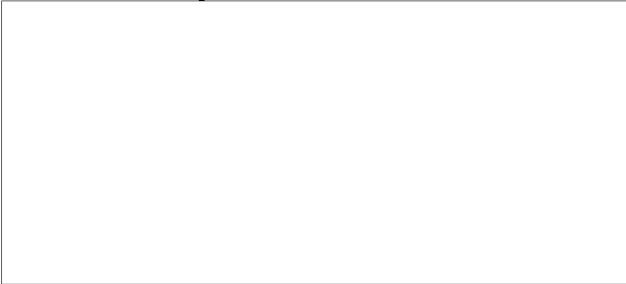
**Figure 9**  
**North-South Korea:**  
**Artillery, 1977-97**



<sup>a</sup> Projected.

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In the antiarmor and air defense weapon categories, the South probably will make little progress in whittling down the North's overwhelming lead. Driving the North's four-to-one advantage [redacted] for each of these categories are its retention of large numbers of World War II-era towed antitank guns and antiaircraft artillery, and the addition of large numbers of Soviet AT-3 manpack antitank and SA-7 shoulder-fired surface-to-air missiles—two of the most modern weapons in the North Korean inventory.



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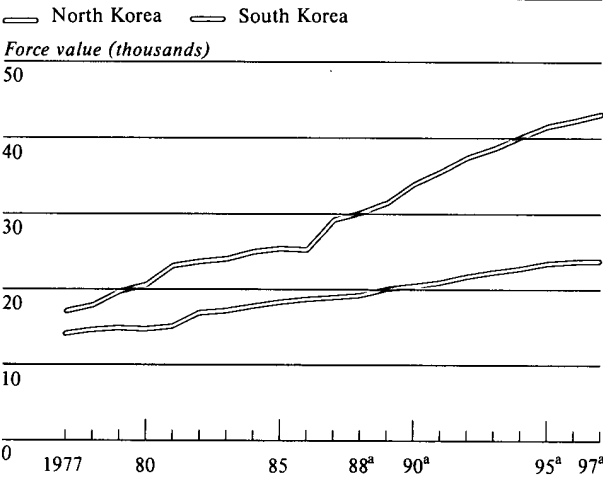
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**Figure 10**  
**North-South Korea:**  
**Fire Support, 1977-97**



<sup>a</sup> Projected.

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**Reserve Forces**

We expect that North Korea's most impressive gains—[redacted] will be in the ready reserve forces as more and better equipped divisions are formed. By the mid-1990s, these forces would represent almost one-fifth of the total ground force combat power [redacted]

[redacted] By then, the North probably will have completed equipping its ready reserve divisions with artillery and the reserves will have some tanks—handed down from the regular forces. [redacted]

**Air Forces**

According to our projections, North Korea will modestly increase its lead over the South in numbers of aircraft during the next 10 years through a combination of foreign imports and domestic production. Nevertheless, it will change the overall air balance

little. The values for new aircraft introduced on both sides will tend to offset one another. Our projections reflect a transfer from the USSR of up to two additional regiments of fighter aircraft—probably MIG-23 Floggers. [redacted]

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[redacted] indigenous production of a fighter, probably based on the Chinese F-7, could begin at any time at a recently built aircraft production plant. The South has begun deploying F-16 fighters purchased from the United States, and [redacted] some form of coproduction or purchases of additional F-16s or similar aircraft will continue throughout the projection period. [redacted]

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**Naval Forces**

Our projections also show little change in the naval balance. Modest increases in the North's attack submarine force—about two units every three years—will continue. South Korea has expressed interest in developing a submarine force, and we project that Seoul will embark on a submarine program with foreign assistance. [redacted]

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**What Could Change the Projections?**

Clearly a range of factors could affect our projections by changing the assumptions on which they are based. A major question mark is the North Korean economy. Although P'yongyang appears committed to a force improvement effort, continued economic problems could prevent the kind of spurt we have assumed. [redacted]

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[redacted] We expect little change in the next decade in the North Korean economy, which has been limping along at a rate of 2-to-3-percent growth annually in the 1980s. [redacted]

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The effect on the balance of substantial assistance from abroad also is uncertain. Moscow is the most likely source of modern weapons and technology

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needed to maintain the North's military superiority and relations between the two countries have grown closer over the past few years. Until recently, weapons deliveries have been modest—most notably a regiment of MIG-23 jet fighters and about two regiments of SA-3 surface-to-air missiles—and the Soviets have been careful not to provide weapons and equipment that would upset the balance with the South. Deliveries of SA-5 surface-to-air missile equipment and ZSU-23-4 mobile antiaircraft guns to North Korea, however, suggest that Moscow has eased restrictions on the types of weapons it would provide P'yongyang, and that other weapons may be forthcoming. Although both are defensive weapons, the SA-5 could reach air targets over much of South Korea, while the ZSU-23-4 helps fill a longstanding need for low-altitude air defense systems that can move with the Army's armor and mechanized forces.

We also expect North Korea to press the Chinese for whatever benefits it can reap. Over the years, Beijing has helped P'yongyang with several weapon programs, but assistance in the form of modern weapons or technology probably will be limited. China currently is embarked on its own weapons modernization program. In our view, it will not want to risk Western assistance by passing proscribed or other potentially significant technology to the North Koreans, and defaults on loans make assistance to North Korea from Western sources unlikely. [ ]

South Korea's economic situation puts it in a much better position than the North. Economic growth in the South by our estimates is expanding at a rate two to three times that of the North from a base two and a half times larger. We believe the South will maintain a 5-to-5.5-percent allocation of GNP for defense spending over the next 10 years. This alone will enable Seoul to outspend P'yongyang on defense each year, and although Seoul has elected to funnel the lion's share of its resources into economic development, it clearly can increase resource allocations to defense. [ ]

A major unknown that could affect force development in both countries is political succession and stability. At 75, President Kim Il-song is still in charge in the North, but he is grooming his son, Kim Chong-il, as

his successor. We continue to believe that senior military leaders—whom Kim Il-song has hand-picked—would transfer their loyalty to Kim Chong-il, but he might not have the absolute authority his father enjoys. As the transition to a Kim Chong-il regime unfolds, the younger Kim might be willing to accede to military requests for increased spending on weapons, but it would come at the expense of other sectors of a troubled economy. A faltering transition could create strains between contenders for power or influence, perhaps providing an opening for advocates of other priorities to win cuts in military spending to improve the economy. In any event, recent indications of an increase in the use of military troops in civil construction projects suggests that Kim Il-song may have begun using such an approach to tackle economic problems and smooth the way for his son's accession. [ ]

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The timetable for the political transition in South Korea is clear, with President Chun Doo Hwan set to step down in February 1988. The election is likely to lead to downward pressure on defense spending, regardless of the winner, but not enough, in our judgment, to create significant unhappiness within the military. Only in the unlikely event of a withdrawal of US military forces might we see a substantial surge in defense spending. [ ]

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#### **Implications for the United States**

US forces obviously will continue to play a major role on the peninsula for the near term, particularly as the tripwire for the US security commitment and therefore, a major deterrent against a North Korean attack. The number of US troops and weapons in the South is small compared with the large forces of the two Koreas, [ ]

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Nonetheless, the US division in South Korea is a major element of the available combat reserve. In addition, the US ability to bring in additional aircraft

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early enough to respond to a North Korean attack provides a further safety margin [redacted]

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[redacted] Still, other factors could offset these advantages. A week or so of poor flying weather—a common occurrence during the summer in Korea—at the time of a North Korean attack, for example, could reduce the effectiveness of our air superiority. [redacted]

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[redacted] the rapid US reinforcement factor would be critical to a successful defense. [redacted]

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At present, the expectation that Seoul will increasingly assume a larger share of its defense suggests that the US materiel and manpower commitments to the Korean peninsula should decline. Indeed, the dynamism of the South Korean economy, combined with the expanding technological capability of its industry underpin the judgment that Seoul will grow more responsible in the 1990s for its own defense. If, [redacted]

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[redacted] however, the gap in military capabilities widens in the North's favor, the implications for US policy and military commitments change considerably. [redacted] the South's advantages—terrain and prepared defenses—will deprive even a considerably more heavily armed North Korean military of a decisive edge in battle. Nonetheless, confronted with a growing lead in North Korean weaponry, the South is likely to intensify pressure on the United States for both military and technical assistance. [redacted]

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